

INTEGRATED CIRCUIT ASSEMBLY MODULE THAT SUPPORTS CAPACITIVE COMMUNICATION BETWEEN SEMICONDUCTOR DIES

ABSTRACT

One embodiment of the present invention provides an integrated circuit assembly module, including a first semiconductor die and a second semiconductor die, each semiconductor die with an active face upon which active circuitry and signal pads reside and a back face opposite the active face. The first and second semiconductor dies are positioned face-to-face within the assembly module so that signal pads on the first semiconductor die overlap with signal pads on the second semiconductor die, thereby facilitating capacitive communication between the first and second semiconductor dies. Additionally, the first and second semiconductor dies are pressed together between a first substrate and a second substrate so that a front side of the first substrate is in contact with the back face of the first semiconductor die and a front side of the second substrate is in contact with the back face of the second semiconductor die.